



Parcel C (RU-C2) Remedial Action (Excavation and SVE) Project Update

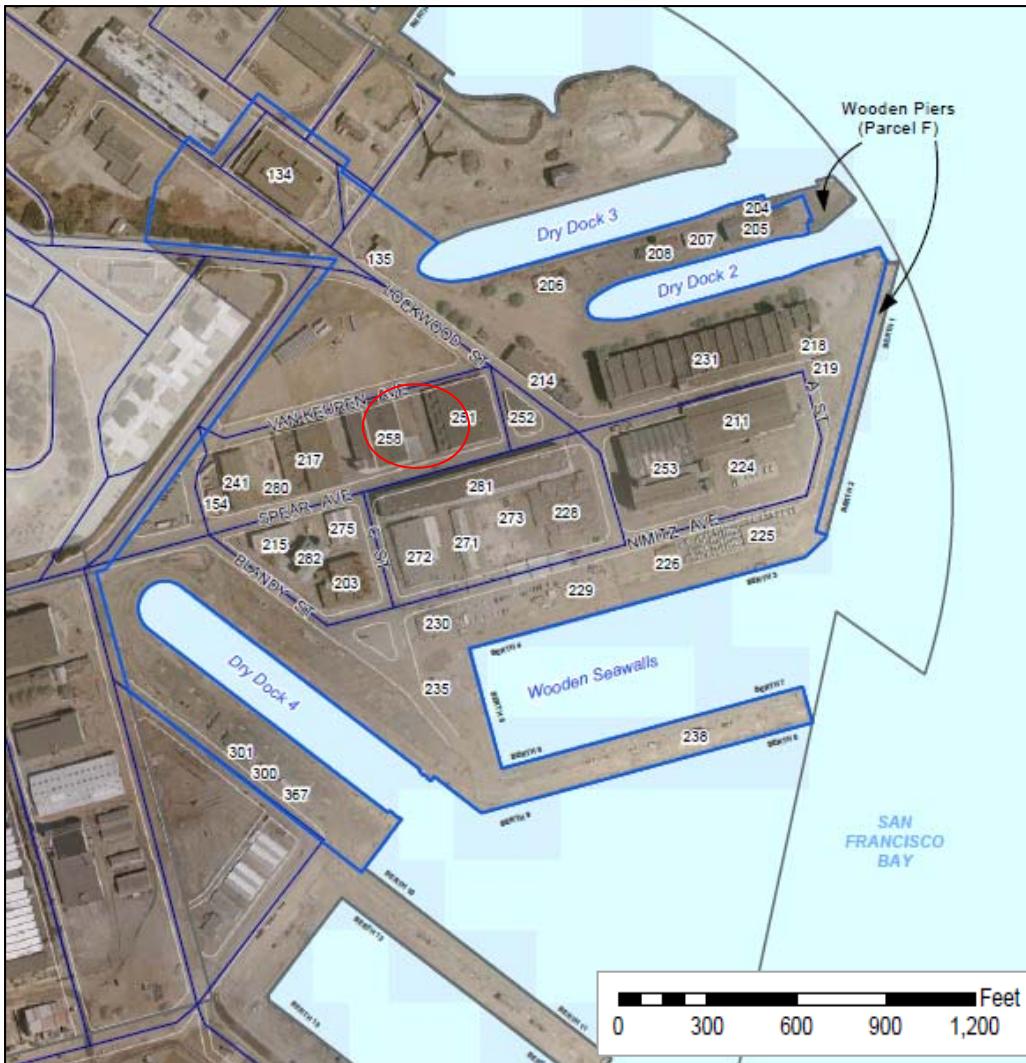
**Hunters Point Naval Shipyard
BCT Meeting August 7, 2014**

8/07/2014

Tony Konzen, P.G., Project Manager
Contracted Support for Navy BRAC
Hunters Point Naval Shipyard



Parcel C and RU-C2 Remedial Action Location



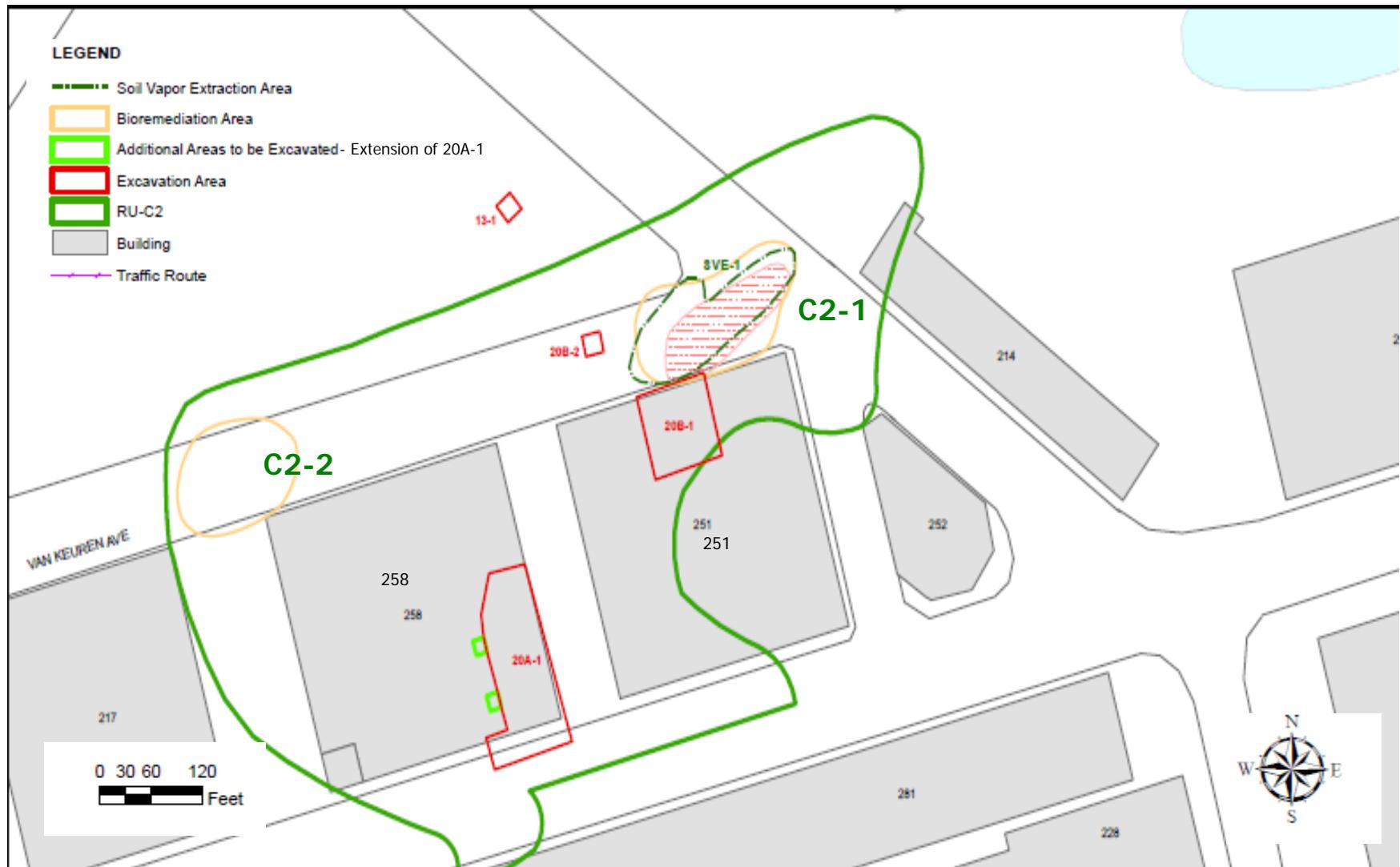
Parcel C Boundary
231 Building Number



Approximate RU-C2 Boundary



RU-C2 Remedial Action Site Map



RU-C2 Remedial Action Presentation Outline



This presentation includes:

- An update on excavation activities for all four excavations (13-1, 20A-1, 20B-1, and 20B-2).
- An update on the SVE-1 activities (North of Building 251).
- A schedule of upcoming activities including SVE-1 system installation.

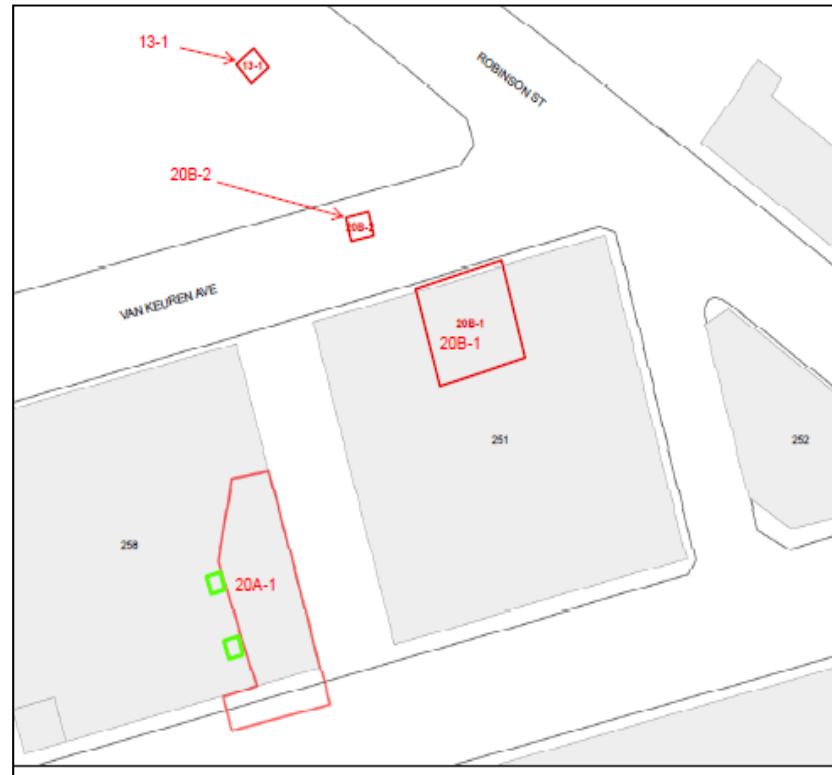
Overview of Excavation 13-1 and 20B-2

Excavation 13-1

- Depth: 10 ft bgs
- Area: 15 ft x 15 ft
- Volume: ~ 90 cubic yards
- COCs: SVOCs (except PAHs) and Pesticides
- All results below Residential RGs.

Excavation 20B-2

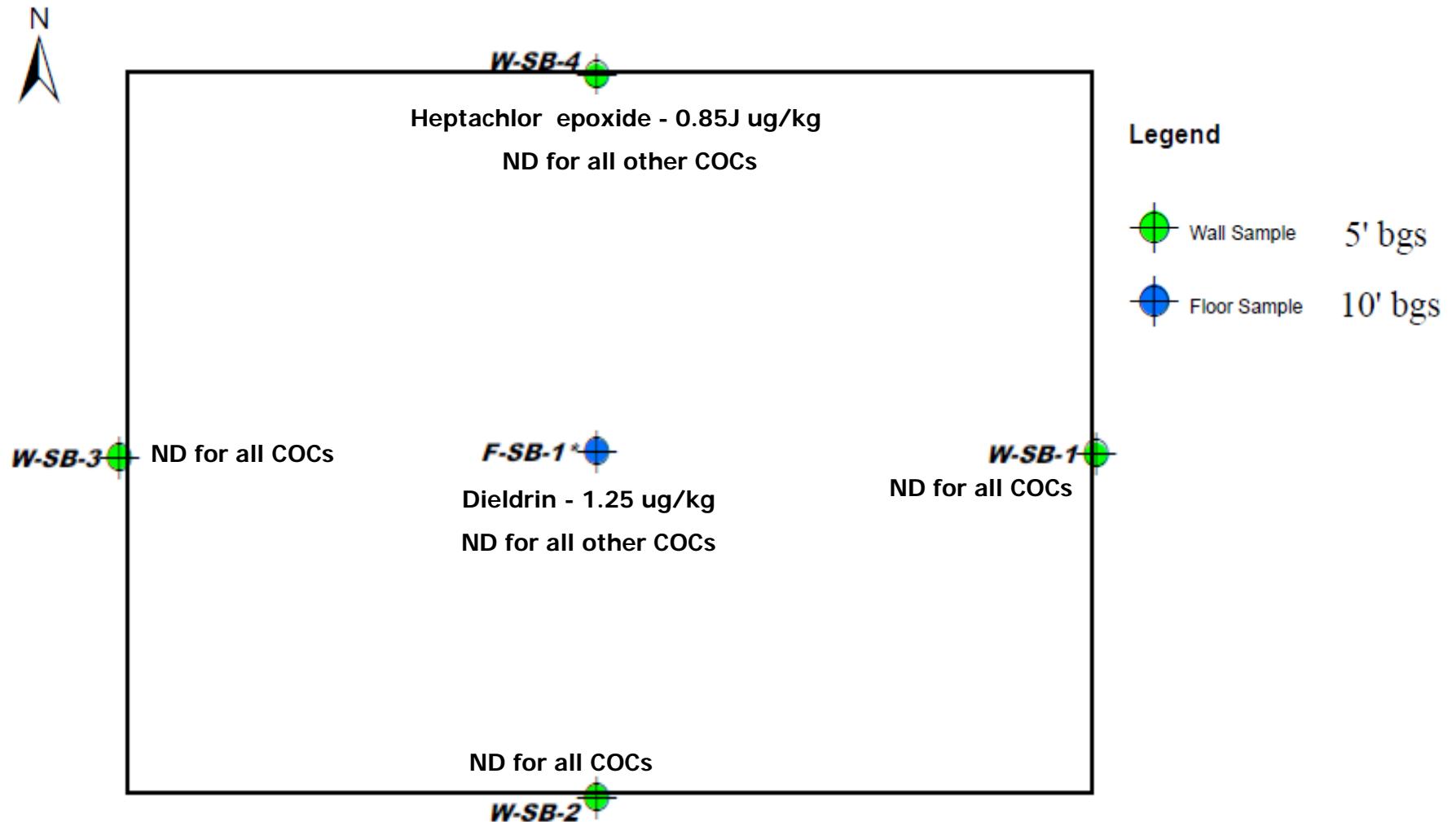
- Depth: 10 ft bgs
- Area: 15 ft x 15 ft
- Volume: ~ 90 cubic yards
- COCs: PAHs.
- All results below Residential RGs.



Note: For both excavations, sidewall samples collected at a rate of one per 20 linear feet, and 5 feet of vertical wall sidewall. Floor samples were collected at a rate of one per 500 square feet.

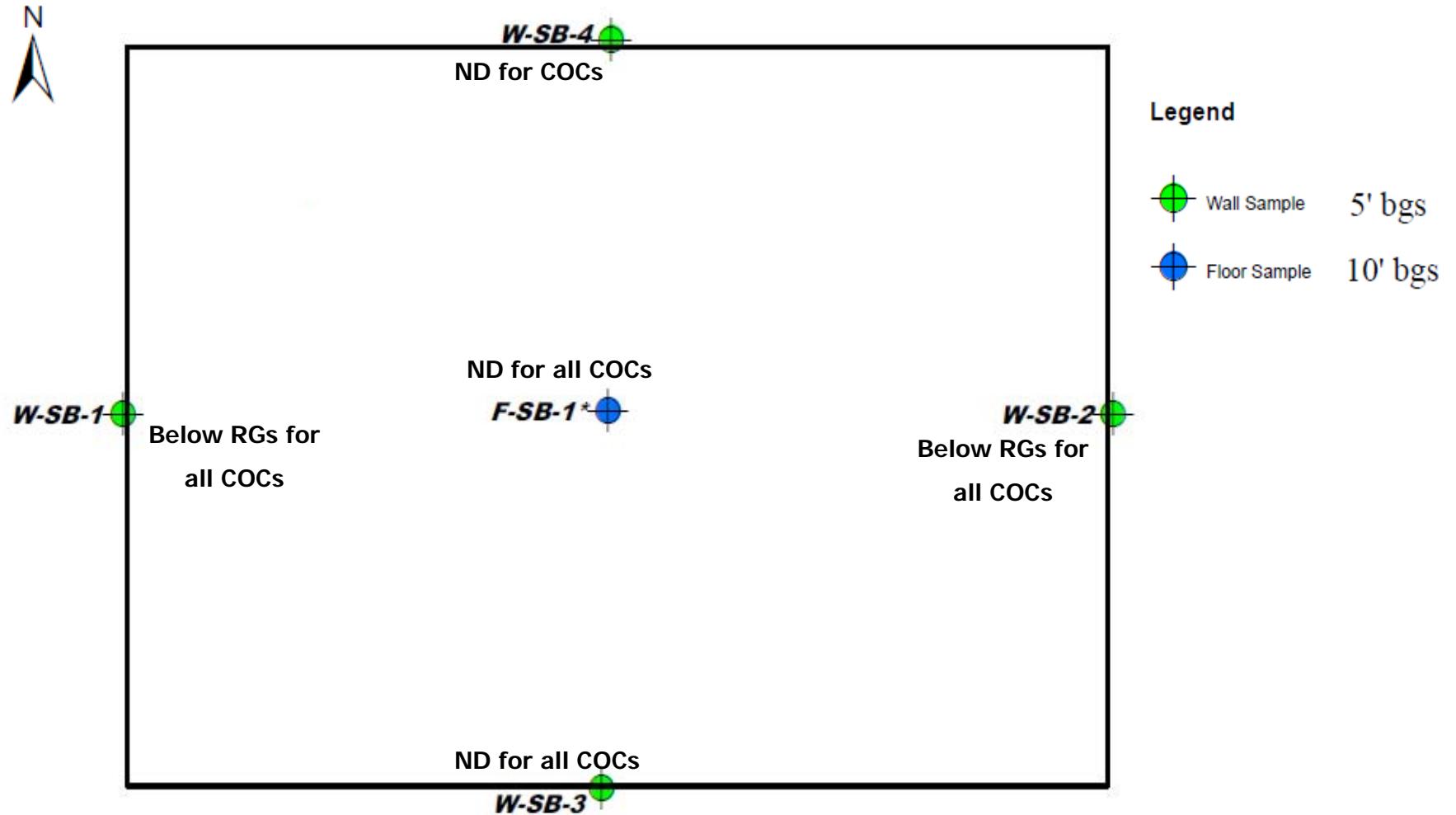


Excavation 13-1 Sample Locations and Results



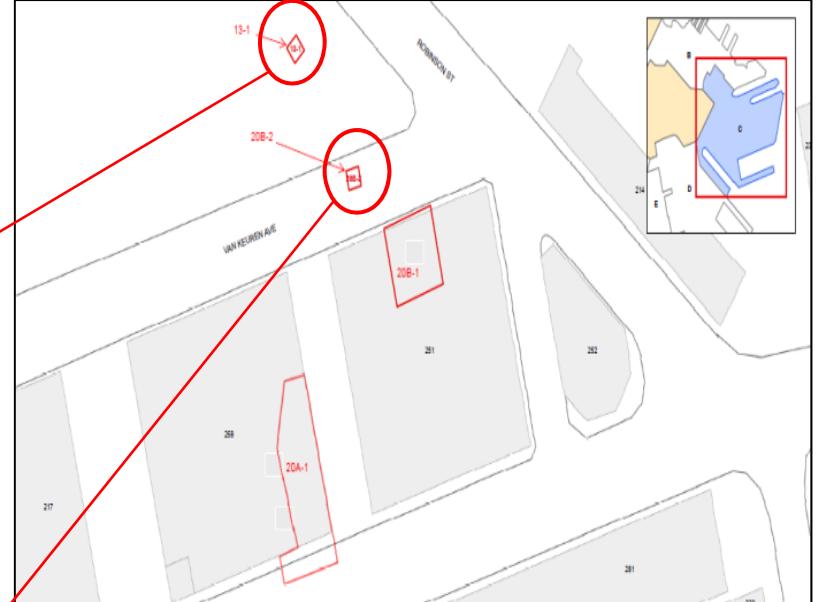


Excavation 20B-2 Sample Locations and Results





Excavations 13-1 and 20B-2

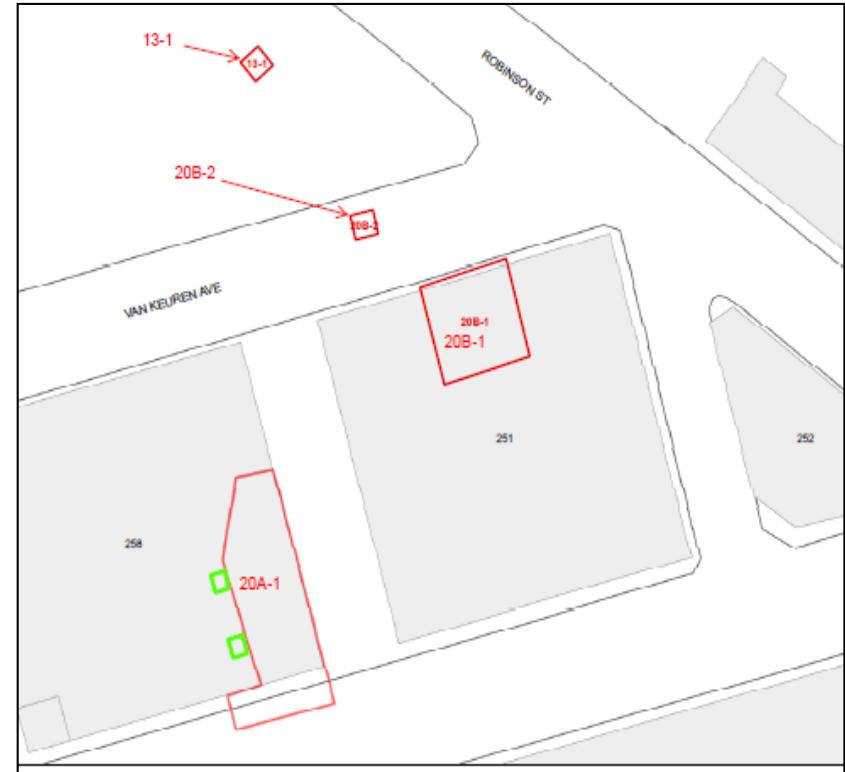


Overview of Excavation 20B-1

Excavation 20B-1

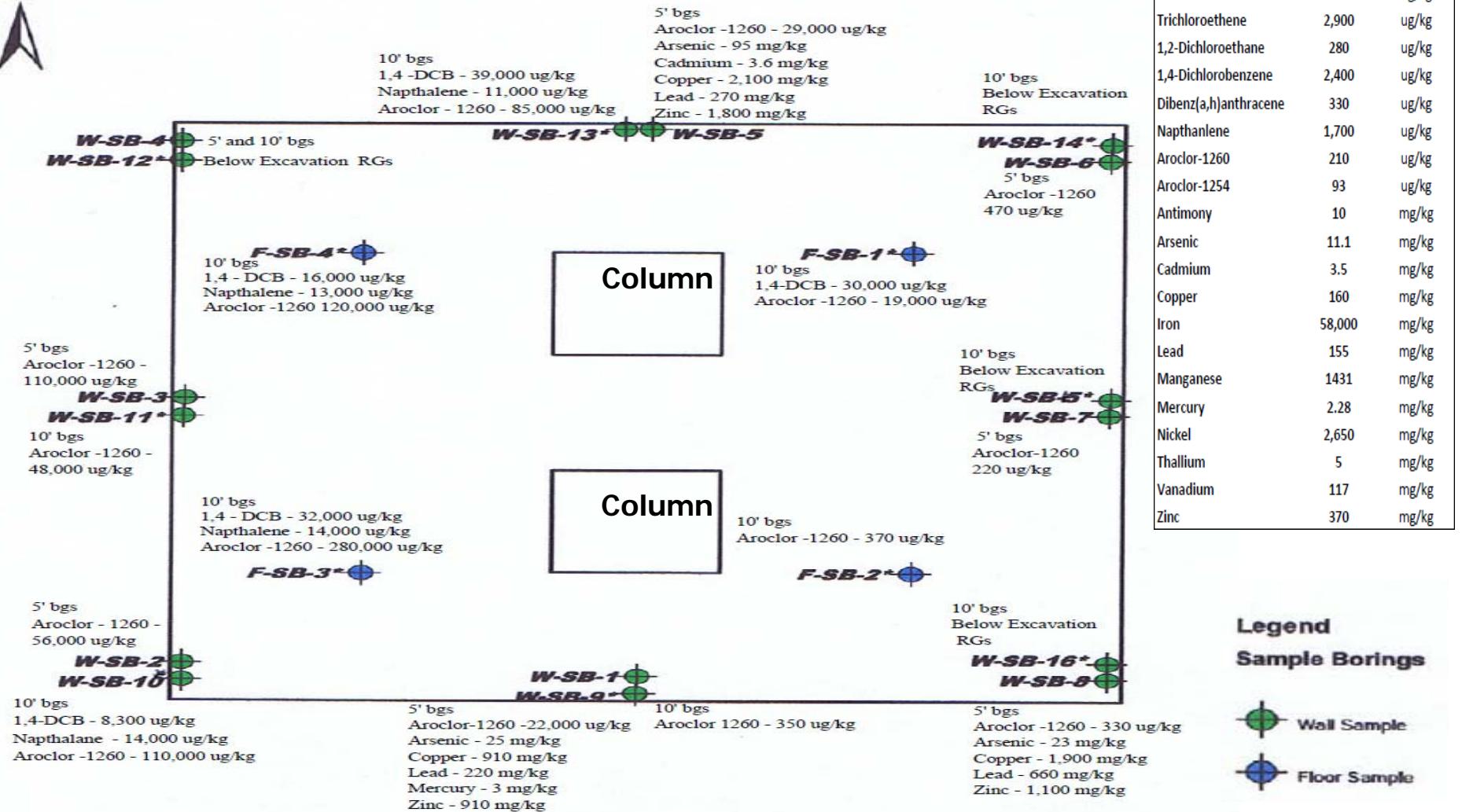
- Depth: 10 ft bgs
- Area: 60 ft x 60 ft (extent of previously excavated concrete foundation area)
- Volume: ~ 1,300 cubic yards
- COCs: VOCs (except benzene), PCBs (Aroclor 1254 and 1260), PAHs, TPH, and metals.
- Residential RGs not met; additional excavation required.

Note: side wall samples collected at a rate of one per 20 linear feet, and 5 feet of vertical wall sidewall.
Floor samples were collected at a rate of one per 500 square feet.





Excavation 20B-1 Sample Locations and Results



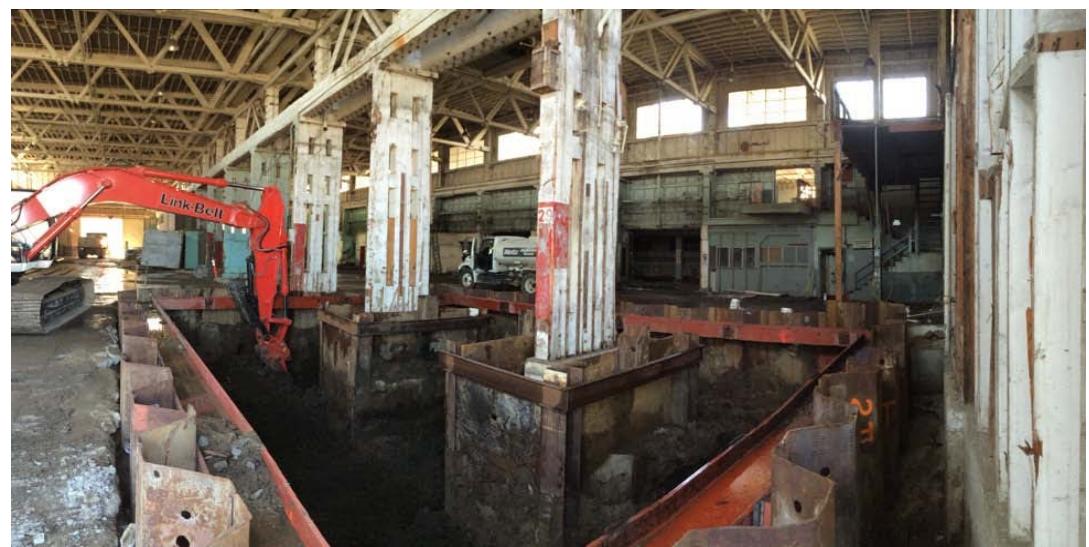


Excavation 20B-1 Summary

- Excavated to 10 feet bgs in the area where the foundation was previously removed.
- Elevated concentrations of PCBs, 1,4-DCB, naphthalene, and metals remain in the sidewalls. Elevated PCBs, naphthalene, and 1,4-DCB remain in the excavation bottom at 10 feet bgs (the maximum depth of remediation prescribed by the ROD).
- Additional investigation and remediation is planned to laterally and vertically define and remove elevated COCs to the extent practicable in early FY15.



Excavation 20B-1 (Inside Building 251)



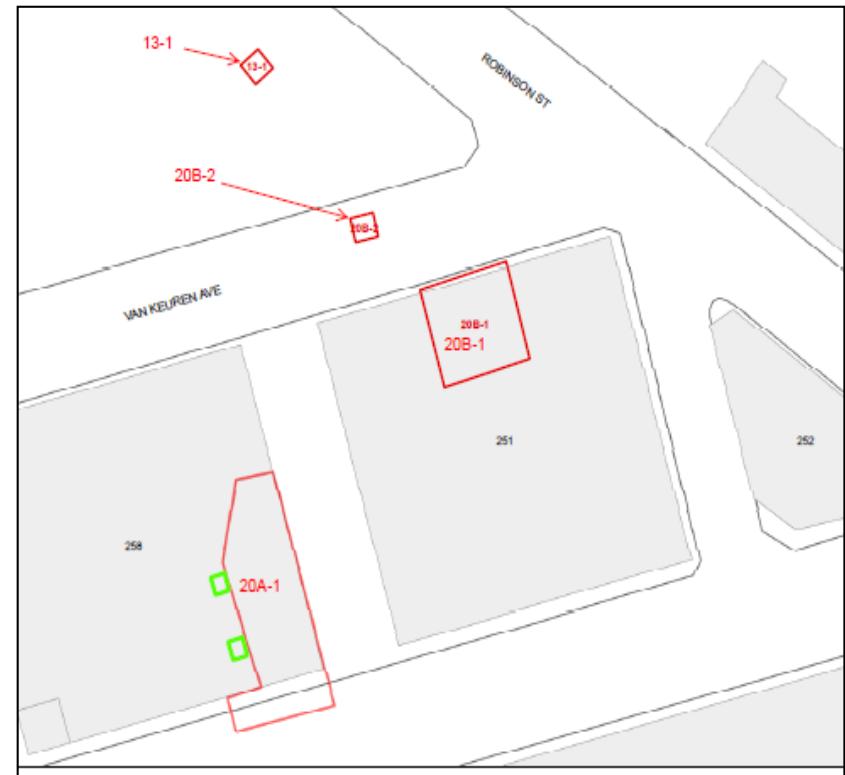


Overview of Excavation 20A-1

Excavation 20A-1

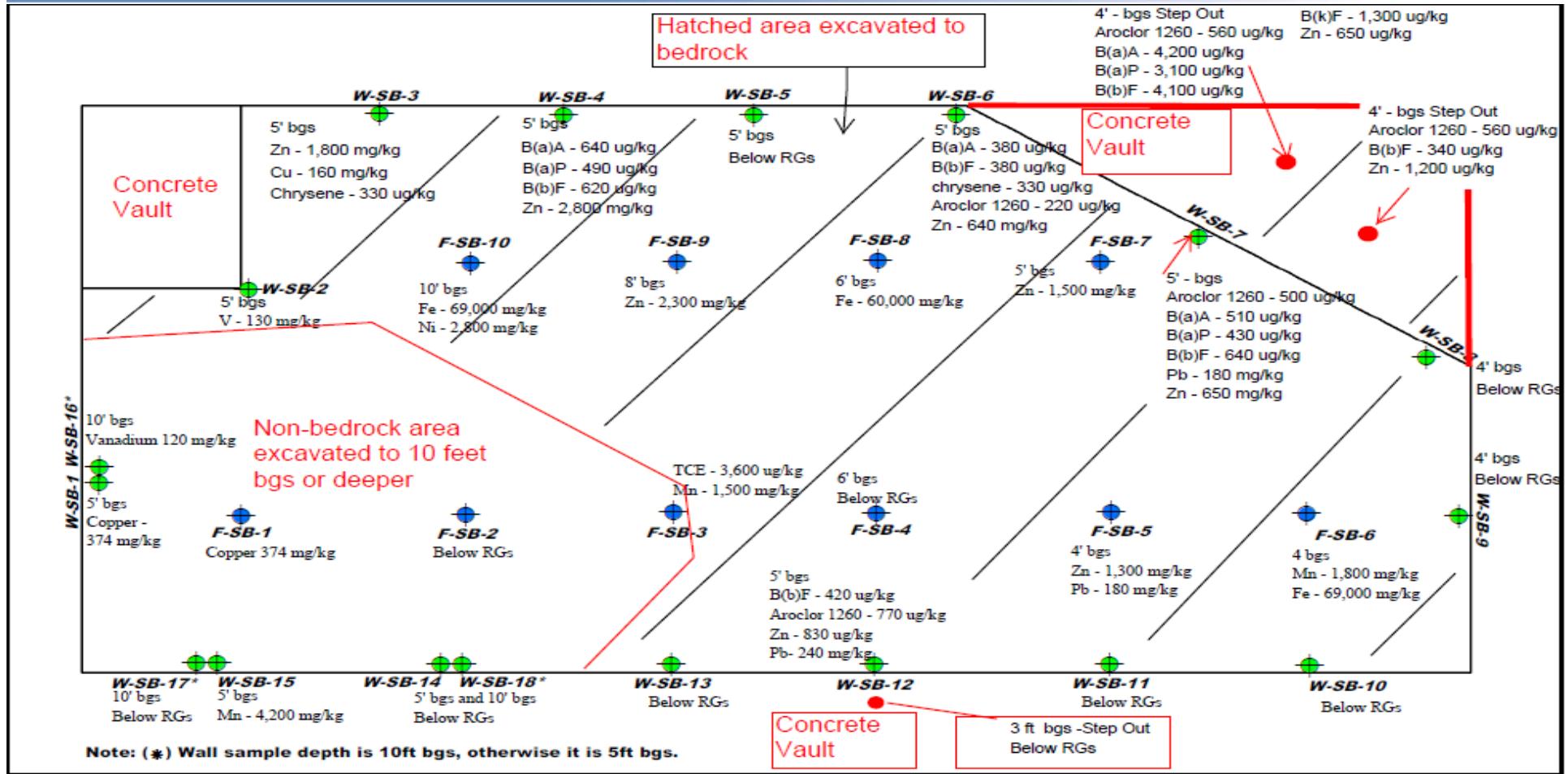
- Depth: 10 ft bgs or bedrock
- Area: 125 ft x 50 ft
- Volume: ~ 2,500 cubic yards
- COCs: VOCs (except benzene), PAHs, PCBs (Aroclor 1254 and 1260), and metals.
- Residential RGs met or bedrock/utility corridors encountered.

Note: sidewall samples collected at a rate of one per 20 linear feet, and 5 feet of vertical wall sidewall.
Floor samples were collected at a rate of one per 500 square feet.



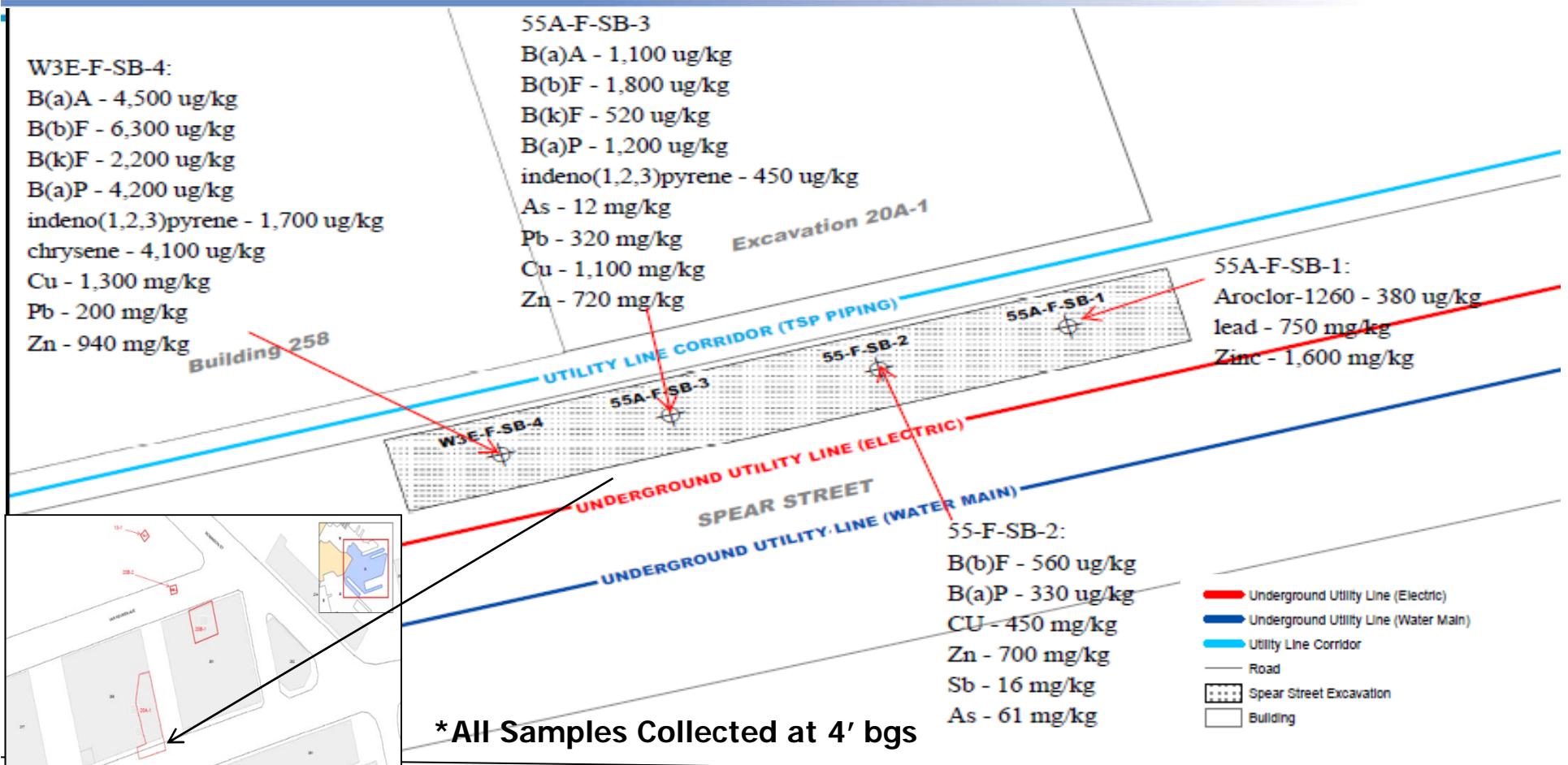


Excavation 20A-1 Sample Locations and Results





Excavation 20A-1 at Spear Ave – Sample Locations and Results



Excavation COC RGs

Tetrachloroethene (PCE) - 480 ug/kg
 Tichloroethene (TCE) - 2,900 ug/kg
 1,2-dichloroethane (1,2-DCA) - 280 ug/kg
 1,4 - DCB - 2,000 ug/kg
 benzo(a)anthracene (B[a]A) - 370 ug/kg
 benzo(a)pyrene (B[a]P) - 330 ug/kg

benzo(b) fluoranthene (B[b]F) - 340 ug/kg Aroclor-1260 - 210 ug/kg
 benzo(k) fluoranthene (B[k]F) - 340 ug/kg Arsenic - 11.1 mg/kg
 Dibenz(a,h)anthracene - 330 ug/kg Antimony - 10 mg/kg
 Chrysene - 330 ug/kg Vanadium (V) - 117 mg/kg
 Indeno(1,2,3-cd)pyrene - 350 ug/kg Copper (Cu) - 160 mg/kg
 Aroclor 1254 - 93 ug/kg Cadmium (Cd) - 3.5 mg/kg

Lead (Pb) - 155 mg/kg
 Manganese(Mn) - 1,431 mg/kg
 Mercury (Hg) - 2.28 mg/kg
 Nickel (Ni) - 2,650 mg/kg
 Iron (Fe) - 58,000 mg/kg
 Thallium (Tl) - 5 mg/kg
 Zinc (Zn) - 370 mg/kg

Floor Samples (~ 4ft bgs)

mg/kg – milligrams per kilogram
 ug/kg – micrograms per kilogram





Excavation 20A-1 Summary

East of Bldg 258

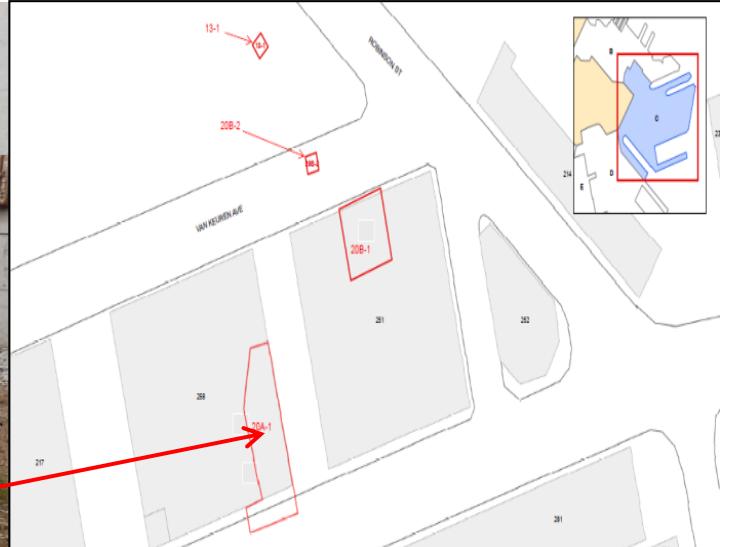
- PAHs, Aroclor-1260, Zn, and Pb above RGs still exist at the sidewalls in the NW corner of excavation 20A-1 (see W-SB-7). This area is at bedrock and up against the building foundation.
- PAHs, Aroclor 1260, zinc and copper above RGs exist on the west wall of the excavation, but are underneath the foundation of the building at 5 feet bgs.
- Metals (Fe, Pb, Ni, Mn and Zn) above RGs remain in floor samples collected at bedrock (4 – 10 feet bgs).

South of Building 258 (at Spear Avenue)

- PAHs above RGs exist at 4 feet bgs in a utility corridor (fiber optic, water, electric, and ACM wrapped piping) that could not be excavated to 10 ft bgs.



Excavation 20A-1 at Building 258



- Step-out Excavation at 20A-1, bedrock slopes down to the south.



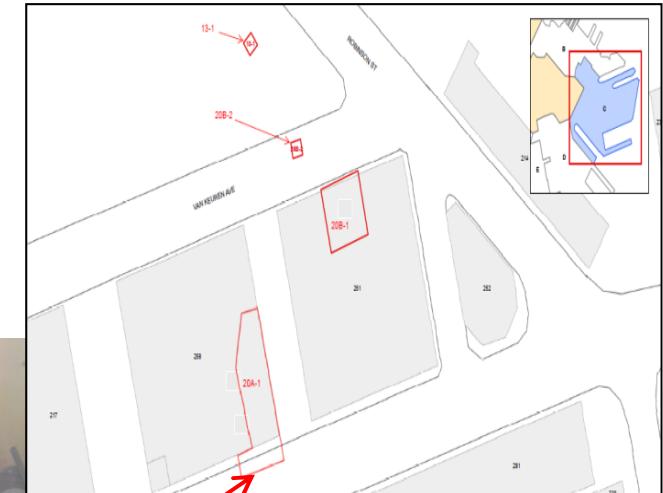
Excavation 20A-1 at Building 258



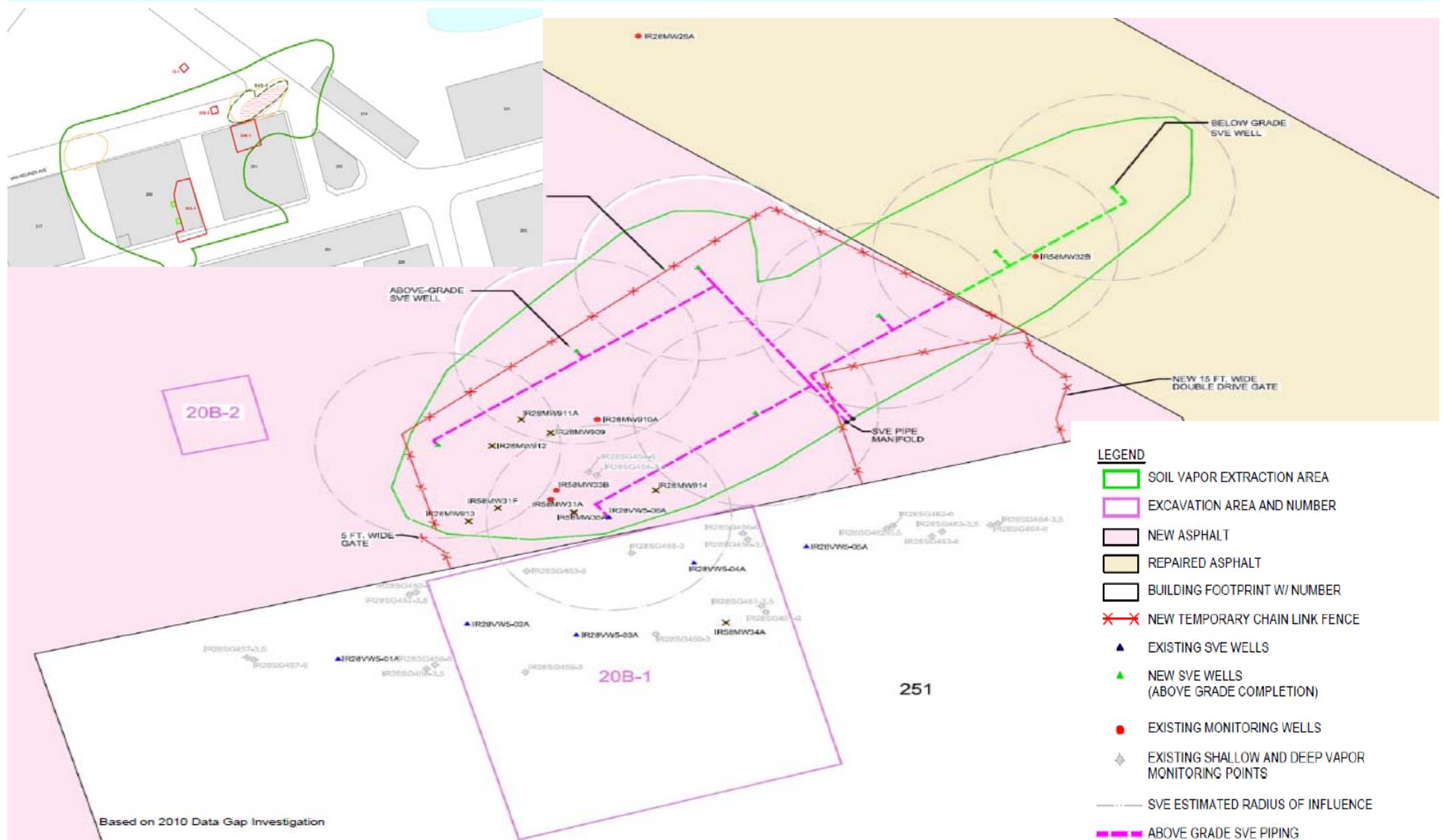
One of the concrete vaults in excavation 20A-1 that is connected to the building foundation. The vault is hollow with utility piping and extends down into bedrock.



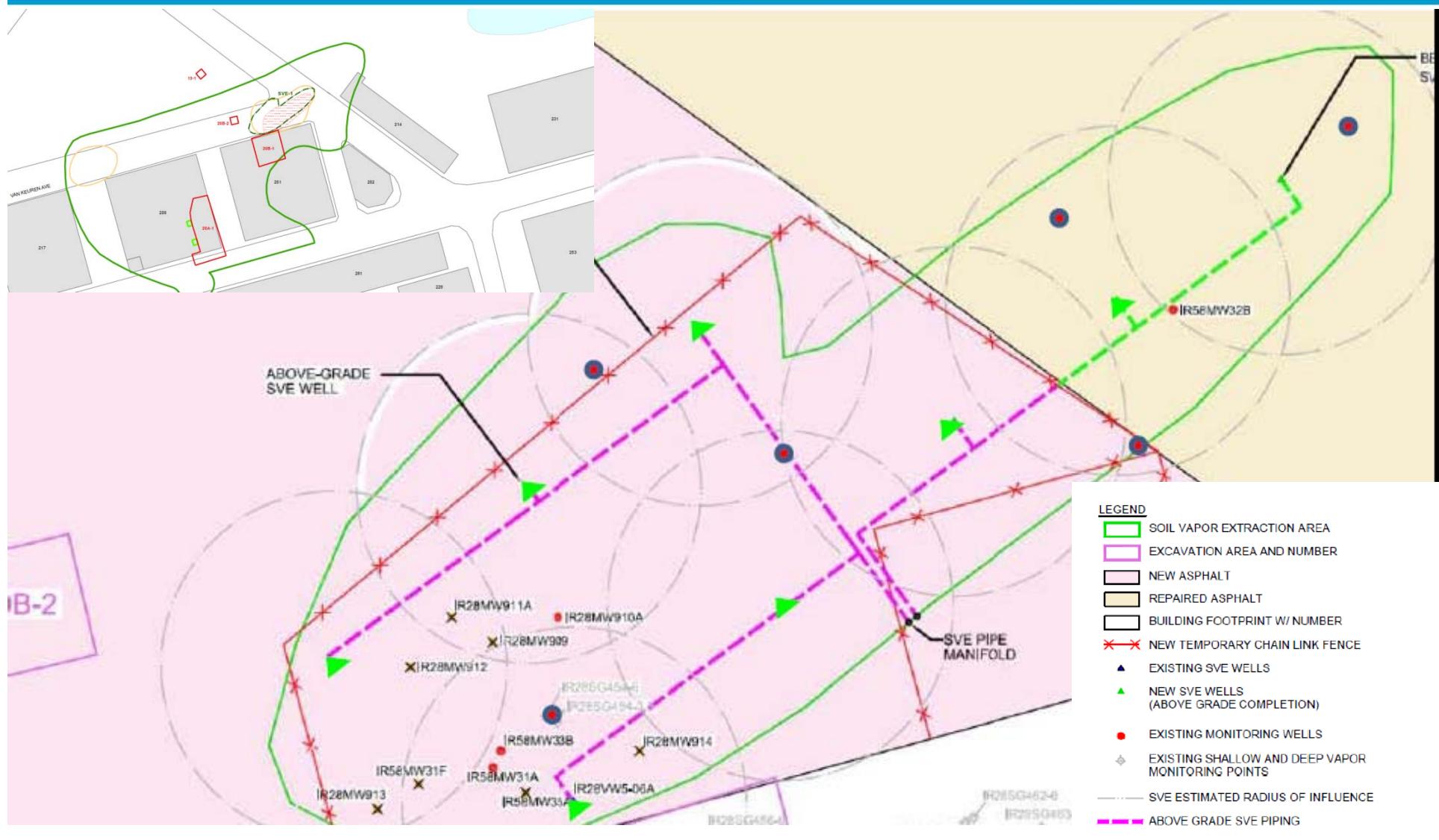
Excavation 20A-1 at Spear Ave with Air Knife



RU-C2: SVE-1 Area Overview



RU-C2: SVE-1 Area Detail

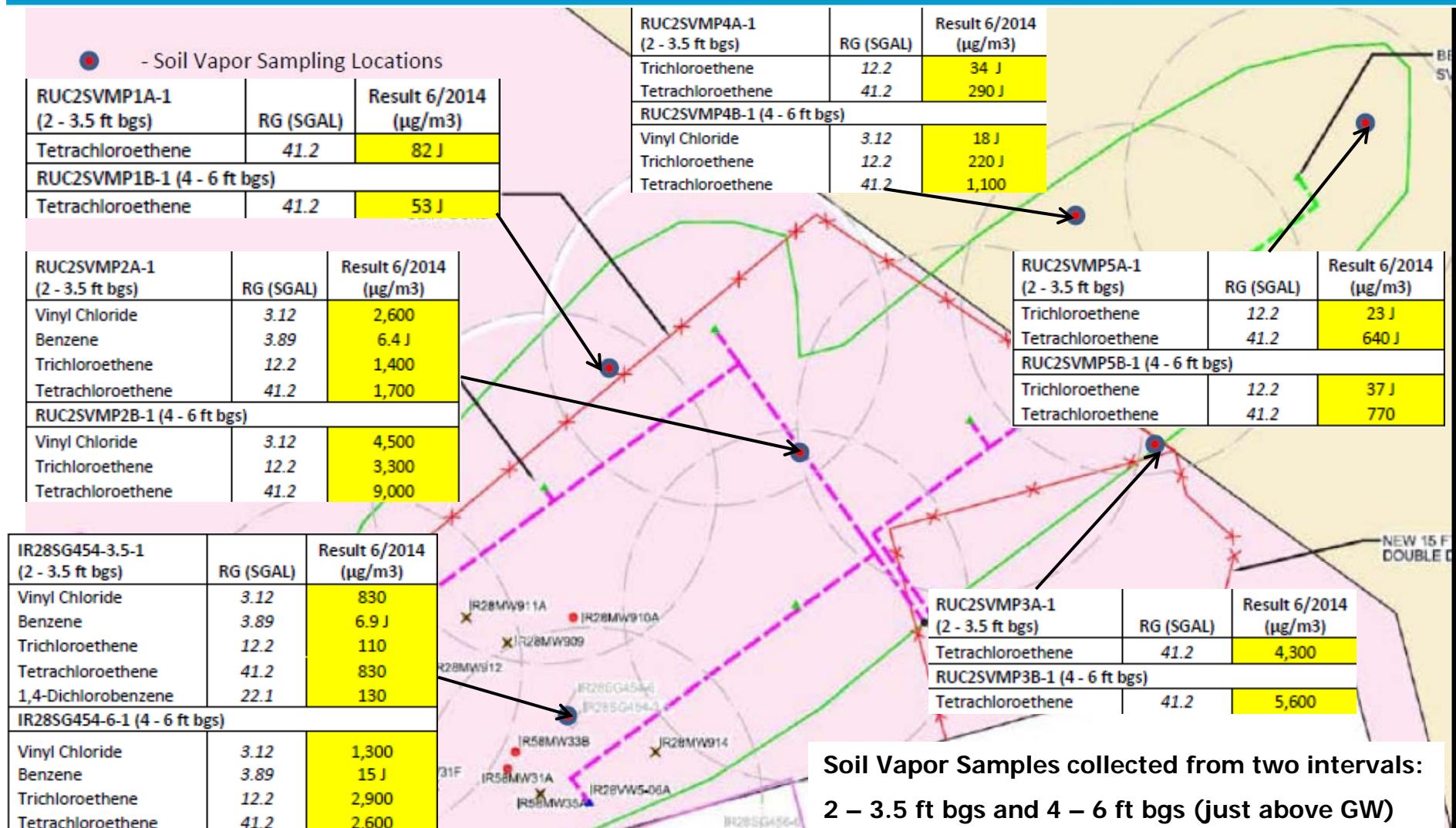




Baseline Soil Gas Sampling at RU-C2 SVE-1 Area

- Baseline soil gas samples were collected from soil vapor monitoring point locations in June 2014.
- COCs for SVE-1 Area are based on the latest SGALS.
- Soil vapor concentrations in soil gas above RGs consist mainly of PCE, TCE, and daughter products (results presented on next slide).

Current Soil Vapor Conditions – June 2014





RU-C2 SVE-1 Area System Installation & Operation

- The infrastructure (compound, concrete pad, piping) for the SVE-1 Area will be installed by Alliance Comp JV in the footprint of the area defined in the Parcel C ROD and RU-C2 RAWP.
- A SVE system at RU-C1, RU-C4 or RU-C5 will be installed at RU-C2 SVE-1 Area once inlet VOC concentrations are asymptotic and/or remediation is complete at one of the aforementioned remedial units. The Parcel C SVE O&M Manual will be updated at that time to reflect this planned approach.
- The RU-C2 SVE-1 Area system will be operated using the same procedures outlined in the O&M Manual (Soil Vapor Extraction System Operation and Maintenance Plan, CB&I 2014).



RU-C2 Schedule

Schedule

- **Excavations/Shoring –**
 - Shoring at Building 251 Completed Feb 2014
 - Demolition of Canopy and Concrete at Building 258 Completed Feb 2014
 - Install Shoring at Building 258 Completed Mar 2014
 - Excavations 13-1 and 20B-2 Completed May 2014
 - Excavation at Building 251 Completed May 2014
 - Excavation at Building 258 Completed May 2014
- **Groundwater Sampling** (1, 3, 6, 9, and 12 month post injection events)
 - Aug 2013 (1-month)
 - Nov 2013(3-month)
 - Mar 2014 (6-month)
 - June 2014 (9-month)
 - Sep 2014 (12-month)
- **SVE system**
 - Installation of SVE system infrastructure Sept 2nd – Sept 12th , 2014
 - Mobilization and startup of SVE Unit Dec , 2014 (tentative)



Parcel C2 Remedial Action Project Update

QUESTIONS?